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NiceZyme View of ENZYME: EC 2.3.1.4

Official Name			
Glucosamine 6-phosphate N-acetyltransferase.			
Alternative Name(s)			
Aminodeoxyglucosephosphate acetyltransferase.			
D-glucosamine-6-P N-acetyltransferase.			
Glucosamine 6-phosphate acetylase.			
Glucosamine-6-phosphate acetylase.			
Glucosamine-phosphate N-acetyltransferase.			
N-acetylglucosamine-6-phosphate synthase.			
Phosphoglucosamine acetylase.			
Phosphoglucosamine N-acetylase.			
Phosphoglucosamine transacetylase.			
Reaction catalysed			
Acetyl-CoA + D-glucosamine 6-phosphate <=> CoA + N-acetyl-D-glucosamine 6-phosphate			
Cross-references			
Biochemical Pathways; map number(s)	D4		
BRENDA	2.3.1.4		
PUMA2	2.3.1.4		
PRIAM enzyme-specific profiles	2.3.1.4		
KEGG Ligand Database for Enzyme Nomenclature	2.3.1.4		
IUBMB Enzyme Nomenclature	2.3.1.4		
IntEnz	2.3.1.4		
MEDLINE	Find literature relating to 2.3.1.4		
MetaCyc	2.3.1.4		
UniProtKB/Swiss-Prot	Q17427, GNA1_CAEEL; Q96EK6, GNA1_HUMAN; Q5RAL9, GNA1_PONPY; O93806, GNA1_CANAL; Q5UPZ9, GNA1_MIMIV; O13738, GNA1_SCHPO; Q9VAI0, GNA1_DROME; Q9JK38, GNA1_MOUSE; P43577, GNA1_YEAST;		

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NiceZyme View of ENZYME: EC 2.6.1.16

Official Name	
Glutamine--fructose-6-phosphate transaminase (isomerizing).	
Alternative Name(s)	
D-fructose-6-phosphate amidotransferase.	
GlcN6P synthase.	
Glucosamine--fructose-6-phosphate aminotransferase (isomerizing).	
Glucosamine-6-phosphate isomerase (glutamine-forming).	
Glucosamine-6-phosphate synthase.	
Hexosephosphate aminotransferase.	
L-glutamine-D-fructose-6-phosphate amidotransferase.	
Reaction catalysed	
L-glutamine + D-fructose 6-phosphate <=> L-glutamate + D-glucosamine 6-phosphate	
Comment(s)	
<ul style="list-style-type: none"> Although the overall reaction is that of a transferase, the mechanism involves the formation of ketimine between fructose 6-phosphate and a 6-amino group from a lysine residue at the active site, which is subsequently displaced by ammonia (transamidination). Formerly EC 5.3.1.19. 	
Cross-references	
Biochemical Pathways; map number(s)	D4
PROSITE	PDOC00406
BRENDA	2.6.1.16
PUMA2	2.6.1.16
PRIAM enzyme-specific profiles	2.6.1.16
KEGG Ligand Database for Enzyme Nomenclature	2.6.1.16
IUBMB Enzyme Nomenclature	2.6.1.16
IntEnz	2.6.1.16
MEDLINE	Find literature relating to 2.6.1.16
MetaCyc	2.6.1.16

UniProtKB/Swiss-Prot

P53704, GFA1_CANAL;	Q09740, GFA1_SCHPO;	P14742, GFA1_YEAST;
Q7T6X6, GFAT_MIMIV;	Q06210, GFPT1_HUMAN;	P47856, GFPT1_MOUSE;
P82808, GFPT1_RAT;	O94808, GFPT2_HUMAN;	Q9Z2Z9, GFPT2_MOUSE;
Q4KMC4, GFPT2_RAT;	Q6F6U8, GLMS_ACIAD;	Q9YCQ6, GLMS_AERPE;
Q8UEH1, GLMS_AGRT5;	O66648, GLMS_AQUAE;	Q81VN5, GLMS_BACAN;
Q73F49, GLMS_BACC1;	Q81J01, GLMS_BACCR;	Q9KG45, GLMS_BACHD;
Q6HPL2, GLMS_BACHK;	Q65P46, GLMS_BACLD;	Q5WLG7, GLMS_BACSK;
P39754, GLMS_BACSU;	Q8AAB1, GLMS_BACTN;	Q6G322, GLMS_BARHE;
Q6FZH6, GLMS_BARQU;	Q7WE36, GLMS_BORBR;	Q7W334, GLMS_BORPA;
Q7VRZ3, GLMS_BORPE;	P59362, GLMS_BRAJA;	Q577Y1, GLMS_BRUAB;
Q8YC47, GLMS_BRUME;	Q8CY30, GLMS_BRUSU;	P57138, GLMS_BUCAI;
Q8KA75, GLMS_BUCAP;	P59499, GLMS_BUCBP;	Q9PMT4, GLMS_CAMJE;
Q9ABV2, GLMS_CAUCR;	Q5L589, GLMS_CHLAB;	Q821Z7, GLMS_CHLCV;
Q9PLA4, GLMS_CHLMU;	Q9Z6U0, GLMS_CHLPN;	Q8KG38, GLMS_CHLTE;
O84823, GLMS_CHLTR;	Q97MN6, GLMS_CLOAB;	Q8XHZ7, GLMS_CLOPE;
Q890U2, GLMS_CLOTE;	Q6NG33, GLMS_CORDI;	Q8FNH2, GLMS_COREF;
Q8NND3, GLMS_CORGL;	O19908, GLMS_CYACA;	Q8XEG2, GLMS_ECO57;
Q8FBT4, GLMS_ECOL6;	P17169, GLMS_ECOLI;	Q6CYJ9, GLMS_ERWCT;
Q5NHQ9, GLMS_FRATT;	Q8RG65, GLMS_FUSNN;	Q5L3P0, GLMS_GEOKA;
Q74GH6, GLMS_GEOSL;	Q7NIG8, GLMS_GLOVI;	Q5FUY5, GLMS_GLUOX;
Q7VKK4, GLMS_HAEDU;	P44708, GLMS_HAEIN;	Q9HT00, GLMS_HALSA;
Q9ZJ94, GLMS_HELPJ;	O26060, GLMS_HELPY;	Q5QZH5, GLMS_IDILO;
Q9CGT6, GLMS_LACLA;	Q88YE7, GLMS_LACPL;	Q5X153, GLMS_LEGPA;
Q5ZRP4, GLMS_LEGPH;	Q5WSX8, GLMS_LEGPL;	Q6AD32, GLMS_LEIXX;
Q72V57, GLMS_LEPIC;	Q8EZQ1, GLMS_LEPIN;	Q92DS8, GLMS_LISIN;
Q722H1, GLMS_LISMF;	Q8Y915, GLMS_LISMO;	Q8TLL3, GLMS_METAC;
Q58815, GLMS_METJA;	Q8TZ14, GLMS_METKA;	Q8Q038, GLMS_METMA;
O26273, GLMS_METTH;	P0A589, GLMS_MYCBO;	P40831, GLMS_MYCLE;
Q73S23, GLMS_MYCPA;	O68956, GLMS_MYCS2;	P0A588, GLMS_MYCTU;
Q5F584, GLMS_NEIG1;	Q9JWN9, GLMS_NEIMA;	Q9K1P9, GLMS_NEIMB;
O68280, GLMS_NOSS9;	Q8ETM5, GLMS_OCEIH;	P57963, GLMS_PASMU;
Q7NA97, GLMS_PHOLL;	Q6LLH3, GLMS_PHOPR;	Q9HT25, GLMS_PSEAE;
Q88BX8, GLMS_PSEPK;	Q87TT8, GLMS_PSESM;	Q9V249, GLMS_PYRAB;
Q8ZTZ0, GLMS_PYRAE;	Q8U4D1, GLMS_PYRFU;	O57981, GLMS_PYRHO;
Q5JH71, GLMS_PYRKO;	Q8Y303, GLMS_RALSO;	Q98LX5, GLMS_RHILO;
Q92PS4, GLMS_RHIME;	Q5PKV9, GLMS_SALPA;	Q8Z2Q2, GLMS_SALTI;
Q8ZKX1, GLMS_SALTY;	Q8CX33, GLMS_SHEON;	Q83IY4, GLMS_SHIFL;
Q56206, GLMS_SPHYA;	Q5HE49, GLMS_STAAC;	P64227, GLMS_STAAM;
P64228, GLMS_STAAAN;	Q6GES3, GLMS_STAAR;	Q6G7F8, GLMS_STAAS;
Q8NVE6, GLMS_STAAW;	Q5HM69, GLMS_STAEQ;	Q8CRL1, GLMS_STAES;
Q8E5P8, GLMS_STRA3;	Q8DZZ7, GLMS_STRA5;	O86781, GLMS_STRCO;
Q8DTY0, GLMS_STRMU;	Q99ZD3, GLMS_STRP1;	Q878N9, GLMS_STRP3;
Q5XBV6, GLMS_STRP6;	Q8P0S7, GLMS_STRP8;	Q97SQ9, GLMS_STRPN;
Q8DRA8, GLMS_STRR6;	Q4J6D9, GLMS_SULAC;	Q67T12, GLMS_SYMTH;
Q8DJI6, GLMS_SYNEL;	P72720, GLMS_SYNY3;	Q9WXZ5, GLMS_THEMEA;
Q72HF4, GLMS_THET2;	Q56213, GLMS_THET8;	Q8R841, GLMS_THETN;
Q56275, GLMS_THIFE;	O83833, GLMS_TREPA;	Q83IA1, GLMS_TROW8;
Q83FU2, GLMS_TROWT;	Q9KUM8, GLMS_VIBCH;	Q5E279, GLMS_VIBF1;
Q87SR3, GLMS_VIBPA;	Q8DEF3, GLMS_VIBVU;	Q7MP62, GLMS_VIBVY;
Q8D3J0, GLMS_WIGBR;	Q8PGH9, GLMS_XANAC;	Q8PCY1, GLMS_XANCP;
Q9PH05, GLMS_XYLFA;	Q87F28, GLMS_XYLFT;	Q8Z9S8, GLMS_YERPE;
Q663R1, GLMS_YERPS;	Q5NRH4, GLMS_ZYMMO;	Q92ZK3, NODM1_RHIME;
P25195, NODM2_RHIME;	P94323, NODM_BRAJA;	Q52846, NODM_RHILT;
P08633, NODM_RHILV;	Q6B308, YM084_YEAST;	

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